REMARKS

Claims 1 to 10 are pending in the application. Claims 2 and 7 have been amended in response to the rejection of those claims and the claims dependent thereon as being indefinite. The indication that claims 2 to 5 and 7 to 10 are drawn to allowable subject matter is again noted with appreciation.

Claims 2 to 5 and 7 to 10 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In making this rejection, the Examiner takes the position that the language "capable of" in independent claims 2 and 7 is not a positive limitation; however, the Examiner states that these claims would be allowable if rewritten or amended to overcome the rejection. In response, claims 2 and 7 have been amended to eliminate the language in question. As amended, it is submitted that the claims clearly recite positive limitations which should be given patentable weight. It is believed that the amendments to claims 2 and 7 *prima facie* present claims 2 to 5 and 7 to 10 in condition for immediate allowance.

Claims 1 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication US 2003/0048768 to Nakamura et al. in view of U.S. Patent No. 6,259,898 to Lewis. It is noted that in applying the reference to claim 1, the Examiner makes reference to "Kitami et al.", which are the applicants in this case, and, further, that the Examiner makes reference to "fig. 1, [0012]". It is first of all understood that the Examiner meant to reference the Nakamura et al. publication, rather than Kitami et al., and the reference "fig. 1, [0012]" should be read as "fig. 1, paragraph [0012]". With this understanding, the rejection is respectfully traversed for the reason that the combination of Nakamura et al. and Lewis neither shows nor suggests the claimed invention.

A key feature of the disclosed and claimed invention is that the wireless LAN base station and the communication control method at the wireless LAN base station are (1) capable of accommodating all of the client terminal stations if the number of client terminal stations wirelessly connected to the wireless LAN base station increases and (2) capable of reducing power consumption if the number of wireless client terminal stations decreases. Applicants accomplish this

by "detecting the number of client terminal stations which are holding the wireless communication with the wireless LAN base station", "*determining if a detected number of client terminal stations is equal to or smaller than a predetermined number*", and "*changing the number of active wireless LAN modules according to whether the detected number of the client terminal stations is equal to or smaller than the predetermined number*" (emphasis added). (The language quoted is from claim 6, but as the Examiner recognizes, similar language is found in claim 1.) It is by changing the number of active wireless LAN modules according to whether the detected number of the client terminal stations is equal to or smaller than the predetermined number that Applicants' invention is capable of reducing power consumption.

With reference to the first embodiment illustrated in Figure 1, the wireless LAN base station 101 may comprise: a first wireless LAN module 105 capable of holding the wireless communication with at least one client terminal station, a second wireless LAN module 107 capable of holding the wireless communication with at least one client terminal station, and control means 109. The control means determines whether the number of the client terminal stations which are holding the wireless communication with the wireless LAN base station 101 is equal to or smaller than a predetermined number. The control means 109 controls all of the client terminal stations which are holding the wireless communication with the wireless LAN base station to hold the wireless communication with the first wireless LAN module 105, controls the first wireless LAN module to be activated and controls the second wireless LAN module 107 to be deactivated, if a determination result of the determination is YES. Further, the control means 109 controls a part of the client terminal stations which are holding the wireless communication with the wireless LAN base station 101 to hold the wireless communication with the first wireless LAN module 105, controls the rest of the client terminal stations which are holding the wireless communication with the wireless LAN base station 101 to hold the wireless communication with the second wireless LAN module 107 and controls the first wireless LAN module 105 and the second wireless LAN module 107 to be activated, if the determination result is NO.

Thus, if there are a predetermined number of client terminal stations communicating with the wireless base station 101, the control means 109 activates the second wireless LAN module 107 but, otherwise, the second wireless LAN module is turned off, saving power at the wireless base station 101.

As was pointed out in the amendment filed April 27, 2007, Nakamura et al. deal with an entirely different problem, and their solution to that problem is entirely different, in both structure and operation, to the claimed invention. More specifically, Nakamura et al. are concerned with information devices having two or more wireless modules and to the use and control of those wireless modules. What Nakamura et al. mean by "information devices" are, for example, notebook type personal computers, such as shown in block diagram from in Figure 1. Thus, the "information device" of Nakamura et al. is the equivalent of a client terminal station in the disclosed and claimed invention, not a wireless LAN base station as claimed. Moreover, what Nakamura et al. describes with respect to Figure 1 is a notebook personal computer having both a Bluetooth wireless module and a wireless LAN module based on the IEEE 802.11b standard. This has become a fairly widespread and conventional arrangement in modern notebook personal computers. Nakamura et al. note that if both of these wireless functions simultaneously operate, they interfere with each other to decrease the communication speed because they both use the same 2.4 GHz ISM band. Therefore, Nakamura et al. provide the user of the notebook personal computer with the ability to disenable an unselected wireless device by directly controlling hardware.

In making the rejection, the Examiner acknowledges that "Nakamura et al. do not disclose means for detecting the number of client terminal stations which are holding the wireless communication with the wireless LAN base station; and means for determining if a detected number of client terminal stations is equal to or smaller than a predetermined number; and means for changing the number of active wireless LAN modules according to whether the detected number of the client terminal stations is equal to or smaller than the predetermined number." In other words, the Examiner acknowledges that three fourths of claim 1 is not disclosed by Nakamura et al. The fact is that Nakamura et al. has nothing to do

with the design, construction and operation of a wireless base station as is claimed in the present application. Moreover, Nakamura et al. is concerned with disenabling either the Bluetooth wireless module or the wireless LAN module in order to prevent interference between the two. This is quite different from activating and deactivating one of the wireless LAN modules of the base station, depending on the number of client terminal stations communicating with the wireless base station, as in the claimed invention.

Nevertheless, the Examiner relies on Lewis for a disclosure of what is quite clearly missing in Nakamura et al. However, a fair and objective view of Lewis will reveal that it is not related to either Nakamura et al. or the claimed invention and, further, there is no reasonable combination of Lewis with Nakamura et al. that would suggest the claimed invention.

Lewis discloses a multi-communication access point for use in wireless network which provides for simultaneous communication with two or more mobile terminals on different channels. The problem addressed by Lewis is the non-reliability of communication between mobile terminals and access points, and the solution applied by Lewis is a frequency hopping diversity technique. More particularly, Lewis' system as shown in Figure 1 comprises a system backbone 17 and a plurality of mobile terminals (MT) 21a to 21d. The access point 19, shown in more detail in Figure 2, a main processor 30, programmed to carry out various control and operational functions, coupled to the system backbone 17 by way of a network interface 32, which permits the main processor to send and receive data packets via the system backbone 17. The main processor is also coupled to memory 34, storing program code which, when executed by the main processor 30, controls the functions of the access point. The memory also stores a look-up table that maintains a record of how various mobile terminals 21 registered to the access point 19 correspond to and are serviced by multiple transceivers included in the access point. Each access point includes a plurality of wireless transceivers 36a and 36b, each of which includes its own receiver 38 and transmitter 40 connected to respective antennas 42a and 42b. The transceivers 36a and 36b also include a microprocessor 44, connected to the main processor 30 through bus 46, for controlling the transceiver. Each of these transceivers 36a and 36b communicate

wirelessly via respectively different first and second frequency hopping sequences.

In operation, at least one of the first and second transceivers 36a and 36b broadcast a beacon including frequency hopping sequence data corresponding to the first and second frequency hopping sequences. A mobile terminal 21 responding to the beacon transmits to the access point a request to register, and the access terminal selectively permits registration of the mobile terminal with at least one of the first transceiver and the second transceiver in response to the request to register. The registration data is stored in the table of memory 34.

It is clear that the frequency hopping diversity technique of Lewis has nothing to do with disenabling either a Bluetooth wireless module or a wireless LAN module in order to prevent interference between the two according to Nakamura et al. What is puzzling is the Examiner's allegation that "Lewis discloses means for detecting the number of client terminal stations which are holding the wireless communication with the wireless LAN base station; and means for determining if the detected number of client terminal stations is equal to or smaller than a predetermined number; and means for changing the number of active wireless LAN modules according to whether the detected number of client terminal stations is equal to or smaller than the predetermined number." The Examiner makes this statement without so much as a citation to where this can be found in the Lewis patent. A thorough search of the Lewis patent reveals that, in column 14, lines 34 et seq., there is a discussion of possible selection criteria for assigning mobile terminals to specific transceivers in access points. However, there is no suggestion of changing the number of active wireless LAN modules. This is the key feature of the claimed invention which permits reducing power consumption if the number of wireless client terminal stations decreases below the predetermined number. It is assumed that the Examiner equates the recited LAN modules to the access points 19 of Lewis, although the Examiner has not articulated this. All access points 19 of Lewis remain active at all times.
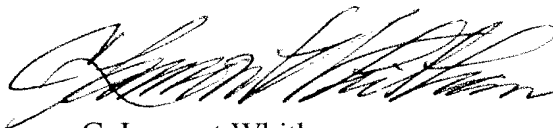
There is in fact no basis for the Examiner's allegation of what is disclosed by Lewis. Moreover, even if Lewis were combined with Nakamura et al., as the Examiner has suggested, such combination would not result in the claimed invention. Since the rejection is in error, it is respectfully requested that the

application be reconsidered, that claims 1 and 6 be allowed together with claims 2 to 5 and 7 to 10, and that the application be passed to issue. In the alternative, it is requested that this amendment be entered for purposes of appeal with allowance of claims 2 to 5 and 7 to 10.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

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